

€ TRAINING

Microsoft ASP.NET





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Introduction:

This program is designed to prepare participants for the certification exam only.

This training program focuses on equipping participants with essential skills in Microsoft ASP.NET development, emphasizing foundational concepts, advanced techniques, and best practices for creating robust web applications.

Program Objectives:

By the end of this program, participants will:

- Gain a solid understanding of ASP.NET framework fundamentals and architecture.
- Develop proficiency in ASP.NET MVC Model-View-Controller for web application development.
- Implement effective security measures and best practices within ASP.NET applications.
- Learn database integration techniques and perform CRUD operations.
- Acquire skills for deploying and maintaining ASP.NET web applications.
- Prepare for the certification exam.

Target Audience:

- Software Developers.
- Web Developers.
- IT Professionals interested in ASP.NET development.

Program Outline:

Unit 1:

Introduction to ASP.NET:

- Overview of ASP.NET framework and its evolution.
- Understanding the differences between ASP.NET Core and ASP.NET Framework.
- Setting up a development environment for ASP.NET.

- Exploring ASP.NET project structure and files.
- Basics of web development using ASP.NET.

Unit 2:

ASP.NET MVC Architecture:

- Introduction to the Model-View-Controller MVC pattern in ASP.NET.
- Creating controllers, views, and models in ASP.NET MVC.
- Implementing routing and URL patterns in ASP.NET MVC applications.
- Using Razor syntax for dynamic web pages.

Unit 3:

Security in ASP.NET:

- Authentication and authorization mechanisms in ASP.NET applications.
- Implementing role-based security using ASP.NET Identity.
- Securing APIs in ASP.NET applications with OAuth and JWT tokens.
- Preventing common security vulnerabilities XSS, CSRF in ASP.NET.
- Configuring HTTPS and SSL/TLS in ASP.NET applications.

Unit 4:

Data Access with ASP.NET:

- Connecting ASP.NET applications to databases SQL Server, MySQL.
- Performing CRUD operations using Entity Framework Core.
- Implementing data validation and error handling in ASP.NET.
- Using LINQ Language Integrated Query for data manipulation.
- Working with asynchronous data operations in ASP.NET.

Unit 5:

Deployment and Maintenance:



- Deploying ASP.NET applications to different environments local, staging, production.
- Configuring and managing application settings in ASP.NET Core.
- Implementing logging and monitoring strategies in ASP.NET applications.
- Best practices for performance optimization and scalability.
- Strategies for debugging and troubleshooting ASP.NET applications.
- Prepare for the certification exam.

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